What is claimed is:

1. A CTLA-4 blocking agent characterized as specifically binding to the extracellular domain of CTLA-4 and inhibitory of CTLA-4 signaling;

wherein said blocking agent is other than an antibody to the extracellular domain of CTLA-4 or an Fab or Fab′ fragment thereof and wherein said blocking agent is effective to increase the response of mammalian T cells to antigenic stimulus or to decrease the growth of tumor cells in a mammalian host.

2. A composition comprising a CTLA-4 blocking agent and an immune response stimulating agent wherein said CTLA-4 blocking agent is characterized as specifically binding to the extracellular domain of CTLA-4 and is inhibitory of CTLA-4 signaling.

3. The composition of Claim 2 wherein said immune response stimulating agent is selected from the group consisting of granulocyte-macrophage colony stimulating factor (GM-CSF), macrophage colony stimulating factor (M-CSF), granulocyte colony stimulating factor (G-CSF), interleukin 3 (IL–3), interleukin 12 (IL-12), interleukin 1 (IL–1), interleukin 2 (IL–2), B7, anti-CD3 and anti-CD28.

4. The composition of Claim 2 wherein said immune response stimulating agent is an antigen.

5. The composition of Claim 4 wherein said antigen is a tumor antigen.

6. The composition of Claim 4 wherein said antigen is from a pathogen.

7. The composition of Claim 2 wherein said immune response stimulating agent is a chemotherapeutic agent.

8. Use of a CTLA-4 blocking agent in combination with use of an immune response stimulating agent to increase the response of mammalian T cells to antigenic stimulus or to decrease the growth of tumor cells in a mammalian host, wherein said CTLA-4 blocking agent is characterized as specifically binding to the extracellular domain of CTLA-4 and inhibitory of CTLA-4 signaling.

9. Use of a CTLA-4 blocking agent in combination with use of an immune response stimularing agent to increase the response of mammalian T cells to antigenic stimulus or to decrease the growth of tumor cells in a mammalian host, wherein said blocking agent is characterized as specifically binding to the extracellular domain of CTLA-4 and inhibitory of CTLA-4 signaling and wherein said blocking agent is other than an antibody to the extracellular domain of CTLA-4 or an Fab or Fab′ thereof.

10. The use of Claim 7 or 8 wherein said immune response stimulating agent is selected from the group consisting of chemotherapeutic agent, antigen, granulocyte-macrophage colony stimulating factor (GM-CSF), macrophage colony stimulating factor (M-CSF), granulocyte colony stimulating factor (G-CSF), interleukin 3 (IL–3), interleukin 12 (IL-12), interleukin 1 (IL–1), interleukin 2 (IL–2), B7, anti-CD3 and anti-CD28.

11. Use of a CTLA-4 blocking agent to increase the response of mammalian T cells to antigenic stimulus or to decrease the growth of tumor cells in a mammalian host, wherein said blocking agent is characterized as specifically binding to the extracellular domain of CTLA-4 and inhibitory of CTLA-4 signaling and wherein said blocking agent is other than an antibody to the extracellular domain of CTLA-4 or Fab or Fab′ fragment thereof.

12. Use of a CTLA-4 blocking agent in combination with use of an irradiation source to produce an immune response stimulating agent to increase the response of mammalian T cells to antigenic stimulus or to decrease the growth of tumor cells in a mammalian host, wherein said CTLA-4 blocking agent is characterized as specifically binding to the extracellular domain of CTLA-4 and is inhibitory of CTLA-4 signaling.